

In the Claims:

1. (Currently Amended) A method for routing calls in a packet-based network, comprising:

~~receiving a line registration request from a first telephony device requesting a line appearance associated with a first telephone number;~~

~~determining that a line control process associated with the first telephone number has not been created;~~

~~creating a line control process associated with the first telephone number and operable to manage calls placed to the first telephone number;~~

receiving a call request at a first call manager from a device coupled to the packet-based network, the call request including a ~~the first~~ telephone number associated with ~~the first telephony device and with one or more other~~ a plurality of telephony devices coupled to the packet-based network and controlled by a plurality of call managers;

~~accessing a registration information table to determine a process identification (PID) of the~~ determining a line control process associated with the first telephone number included in the call request;

communicating the call request to the line control process ~~using the PID~~;

determining a device process controlling each telephony device associated with the ~~first~~ telephone number included in the call request; and

communicating the call request from the line control process to the device processes.

2. (Previously Presented) The method of Claim 1, wherein:
the packet-based network comprises an Internet Protocol (IP) network; and
the plurality of telephony devices comprise IP telephony devices.

3. (Previously Presented) The method of Claim 1, wherein receiving a call request at the first call manager from the device coupled to the packet-based network comprises receiving the call request from a telephony device coupled to the packet-based network.

4. (Previously Presented) The method of Claim 1, wherein receiving a call request at the first call manager from the device coupled to the packet-based network comprises receiving a call request from a gateway device coupled to the packet-based network, the gateway device receiving the call request from a telephony device external to the packet-based network.

5. (Canceled)

6. (Original) The method of Claim 1, wherein communicating the call request to the line control process comprises communicating the call request to a line control process executing at a second call manager.

7. (Original) The method of Claim 1, wherein:

determining a device process controlling each telephony device comprises accessing a line control database associated with the line control process to determine a PID of each device process; and

communicating the call request from the line control process to the device processes comprises communicating the call request to the device processes using the PIDs of the device processes.

8. (Original) The method of Claim 1, wherein communicating the call request from the line control process to the device processes comprises communicating the call request to the device processes in parallel.

9. (Original) The method of Claim 1, wherein communicating the call request from the line control process to the device processes comprises communicating the call request to the device processes in series.

10. (Original) The method of Claim 1, further comprising:
communicating the call request from a device process to the telephony device controlled by the device process;
receiving a call proceed signal from the telephony device indicating acceptance of the call request; and
communicating the call proceed signal from the device process to the line control process.

11. (Original) The method of Claim 10, further comprising establishing media streaming between the device from which the call request was received and the telephony device from which the call proceed signal was received.

12. (Canceled)

13. (Currently Amended) The method of ~~Claim 1~~, Claim 80 further comprising:
communicating the PID of the line control process to a first device process controlling the first telephony device;
communicating the PID of the first device process to the line control process; and
storing the PID of the first device process in a line control database associated with the line control process.

14. (Original) The method of Claim 13, wherein:
creating a line control process comprises creating a line control process executing at the first call manager; and
communicating the PID of the line control process to a first device process comprises communicating the PID of the line control process to a first device process executing at a second call manager.

15. (Original) The method of Claim 13, wherein:
creating a line control process comprises creating a line control process executing at a second call manager; and
communicating the PID of the line control process to a first device process comprises communicating the PID of the line control process to a first device process executing at the first call manager.

16. (Original) The method of Claim 13, further comprising:
receiving a line registration request from a second telephony device requesting a line appearance associated with the first telephone number;
determining that a line control process associated with the first telephone number has already been created;
communicating the PID of the line control process associated with the first telephone number to a second device process controlling the second telephony device;
communicating the PID of the second device process to the line control process; and
storing the PID of the second device process in the line control database associated with the line control process.

17. (Currently Amended) A method for routing calls in a packet-based network, comprising:

receiving a call request at a first call manager from a device coupled to the packet-based network, the call request including a telephone number associated with a plurality of telephony devices coupled to the packet-based network and controlled by a plurality of call managers;

~~accessing a registration information table to determine the process identification (PID) of each~~ determining the location of a plurality of line control processes associated with the telephone number included in the call request, each line control process executing at a different call manager;

communicating the call request to the line control processes ~~using the PID of each line control process~~;

determining the location of at least one device process associated with each line control process, each device process controlling one of the telephony devices associated with the telephone number included in the call request; and

communicating the call request from each line control process to the associated device process.

18. (Previously Presented) The method of Claim 17, wherein:
the packet-based network comprises an Internet Protocol (IP) network; and
the plurality of telephony devices comprise IP telephony devices.

19. (Previously Presented) The method of Claim 17, wherein receiving a call request at the first call manager from the device coupled to the packet-based network comprises receiving the call request from a telephony device coupled to the packet-based network.

20. (Previously Presented) The method of Claim 17, wherein receiving a call request at the first call manager from the device coupled to the packet-based network comprises receiving the call request from a gateway device coupled to the packet-based network, the gateway device receiving the call request from a-an external telephony device external to the packet-based network.

21. (Canceled)

22. (Previously Presented) The method of Claim 17, wherein communicating the call request to the line control processes comprises communicating the call request to at least one line control process executing at one of the call managers other than the first call manager.

23. (Original) The method of Claim 17, wherein communicating the call request to the line control processes comprises communicating the call request to the line control processes in parallel.

24. (Original) The method of Claim 17, wherein communicating the call request to the line control processes comprises communicating the call request to the line control processes in series.

25. (Original) The method of Claim 17, further comprising:

communicating the location of the plurality of line control processes to a first lock manager associated with a first line control process;

communicating a lock request signal from the first lock manager associated with the first line control process to each of the other line control processes associated with the telephone number included in the call request;

communicating the lock request signal from each of the other line control processes to an lock manager associated with each line control process;

receiving a lock response at each of the other line control process from the associated lock manager; and

communicating the lock response from each line control process to the first lock manager.

26. (Original) The method of Claim 25, wherein:

receiving a lock response at each line control process from the associated lock manager comprises receiving a response indicating the lock request has been granted; and

communicating the call request to the line control processes comprises communicating the call request to the line control processes in response to receiving the lock response from each line control process at the first lock manager.

27. (Canceled)

28. (Currently Amended) The method of ~~Claim 17~~ Claim 82, wherein:

determining the location of at least one device process comprises accessing a line control database associated with the line control process to determine a PID of the device process; and

communicating the call request from the line control process to the device process comprises communicating the call request to the device process using the PID of the device process.

29. (Currently Amended) The method of ~~Claim 17~~ Claim 82, comprising:
communicating the call request from the device process to the telephony device controlled by the device process;
receiving a call proceed signal from the telephony device indicating acceptance of the call request; and
communicating the call proceed signal from the device process to the line control process.

30. (Original) The method of Claim 29, further comprising establishing media streaming between the device from which the call request was received and the telephony device from which the call proceed signal was received.

31. (Previously Presented) The method of Claim 17, further comprising:
receiving a line registration request at the first call manager from a first telephony device requesting a line appearance associated with a first telephone number;
determining that a first line control process associated with the first telephone number has not been created at the first call manager; and
creating the first line control process at the first call manager associated with the first telephone number and operable to manage calls placed to the first telephone number.

32. (Previously Presented) The method of Claim 31, further comprising:
communicating the PID of the first line control process to a first device process controlling the first telephony device;
communicating the PID of the first device process to the first line control process; and
storing the PID of the first device process in a first line control database at the first call manager associated with the first line control process.

33. (Previously Presented) The method of Claim 31, further comprising:
receiving the line registration request at a second call manager from a second telephony device requesting the line appearance associated with the first telephone number;
determining that a second line control process associated with the first telephone number has not been created at the second call manager; and
creating the second line control process at the second call manager associated with the first telephone number and operable to manage calls placed to the first telephone number.

34. (Original) The method of Claim 33, further comprising:
communicating the PID of the second line control process to a second device process controlling the second telephony device;
communicating the PID of the second device process to the second line control process; and
storing the PID of the second device process in a second line control database associated with the second line control process.

35. (Previously Presented) The method of Claim 31, further comprising:
receiving the line registration request at the first call manager from a second telephony device requesting the line appearance associated with the first telephone number;
determining that the first line control process is already associated with the first telephone number;
communicating the PID of the first line control process to a second device process controlling the second telephony device;
communicating the PID of the second device process to the first line control process;
and
storing the PID of the second device process in a first line control database associated with the first line control process.

36. (Currently Amended) A call manager for routing calls in a packet-based network, comprising:

a first device process controlling a first device coupled to the packet-based network and operable to receive a call request from the device, the call request including a first telephone number associated with a plurality of telephony devices coupled to the packet-based network and controlled by a plurality of call managers;

a call control module operable to receive the call request from the first device process;

a digit analysis module operable to:

receive the first telephone number from the call control module;

~~access a registration information table to determine a process identification~~
(PID) determine the location of a line control process associated with the first telephone number; and

communicate the location of the line control process to the call control module; and

~~the call control module further operable to communicate the call request to the line control process using the PID; and~~

~~the~~ a line control process operable to:

receive the call request from the call control module;

determine the location of a plurality of device processes, including the first device process, each device process controlling one of the telephony devices associated with the first telephone number; and

communicate the call request to the device processes.

37. (Original) The call manager of Claim 36, wherein:

the packet-based network comprises an Internet Protocol (IP) network; and

the plurality of telephony device associated with the telephone number in the call request comprise IP telephony devices.

38. (Previously Presented) The call manager of Claim 36, wherein the first device process controls a first telephony device coupled to the packet-based network and is operable to receive the call request from the first telephony device.

39. (Previously Presented) The call manager of Claim 36, wherein the first device process controls a first gateway device coupled to the packet-based network and is operable to receive the call request from the first gateway device, the first gateway device having received the call request from an external telephony device external to the packet-based network.

40. (Canceled)

41. (Previously Presented) The call manager of Claim 36, wherein the line control process is further operable to:

access an associated line control database to determine a PID of each device process controlling one of the telephony devices associated with the first telephone number; and

communicate the call request to the device processes using the PIDs of the device processes.

42. (Original) The call manager of Claim 36, wherein the line control process is operable to communicate the call request to the device processes in parallel.

43. (Original) The call manager of Claim 36, wherein the line control process is operable to communicate the call request to the device processes in series.

44. (Previously Presented) The call manager of Claim 36, wherein each device process controlling one of the telephony devices associated with the first telephone number is further operable to:

communicate the call request to the telephony device controlled by the device process;

receive a call proceed signal from the telephony device indicating acceptance of the call request; and

communicate the call proceed signal to the line control process.

45. (Original) The call manager of Claim 44, wherein the call control module is further operable to:

receive the call request from the line control process; and

establish media streaming between the first device and the telephony device from which the call proceed signal was received.

46. (Previously Presented) The call manager of Claim 36, further comprising a line manager operable to receive a line registration request from a telephony device requesting a line appearance associated with the first telephone number.

47. (Previously Presented) The call manager of Claim 46, wherein:

the digit analysis module is further operable to receive the first telephone number from the line manager and to determine that the line control process associated with the first telephone number has not been created; and

wherein the line manager is further operable to create a line control process associated with the first telephone number.

48. (Original) The call manager of Claim 47, wherein:

the line manager is further operable to communicate the PID of the line control process to a second device process controlling the second telephony device; and

the line control process is operable to receive a PID of the second device process from the second device process and to store the PID of the second device process in a line control database associated with the line control process.

49. (Previously Presented) The call manager of Claim 48, wherein the line control process is further operable to:

receive the PID of a third device process controlling a third telephony device requesting the line appearance associated with the first telephone number, the third device process executing at a second call manager and having received the PID of the line control process from the line manager executing at the second call manager; and

store the PID of the third device process in the line control database associated with the line control process.

50. (Currently Amended) A call manager for routing calls in a packet-based network, comprising:

a first device process controlling a first device coupled to the packet-based network and operable to receive a call request from the first device, the call request including a first telephone number associated with a plurality of telephony devices coupled to the packet-based network and controlled by a plurality of call managers;

a call control module operable to receive the call request from the first device process;

a digit analysis module operable to:

receive the first telephone number from the call control module;

~~access a registration information table to determine a process identification (PID) of each~~ determine the location of a plurality of line control processes associated with the first telephone number, each line control process executing at a different call manager; and

communicate the ~~PID~~ location of each line control ~~processes~~ process to the call control module; and

the call control module further operable to communicate the call request to the line control processes ~~using the PIDs~~.

51. (Original) The call manager of Claim 50, wherein:

the packet-based network comprises an Internet Protocol (IP) network; and

the plurality of telephony device associated with the telephone number in the call request comprise IP telephony devices.

52. (Previously Presented) The call manager of Claim 50, wherein the first device process controls a first telephony device coupled to the packet-based network and is operable to receive the call request from the first telephony device.

53. (Previously Presented) The call manager of Claim 50, wherein the first device process controls a first gateway device coupled to the packet-based network and is operable to receive the call request from the first gateway device, the first gateway device having received the call request from a telephony device external to the packet-based network.

54. (Canceled)

55. (Original) The call manager of Claim 50, wherein the call control module is operable to communicate the call request to the line control processes in parallel.

56. (Original) The call manager of Claim 50, wherein the call control module is operable to communicate the call request to the line control processes in series.

57. (Original) The call manager of Claim 50, further comprising:
a first line control process associated with the first telephone number and operable to receive the location of the other line control processes associated with the first telephone number from the call control module; and
a lock manager operable to:
 receive the location of the other line control processes;
 communicate a lock request signal to each of the other line control processes;
 receive a lock response from each line control process indicating that a lock manager associated with each of the other line control processes has granted the lock request;
and
 communicate the lock response from each line control process to the first line control process.

58. (Previously Presented) The call manager of Claim 57, wherein:
the first line control process is further operable to communicate a signal to the call control module indicating that the lock request has been granted by each of the plurality of line control process associated with the first telephone number; and
the call control module is operable to communicate the call request to each of the line control processes in response to receiving the signal from the first line control process.

59. (Previously Presented) The call manager of Claim 58, further comprising:
a second device process controlling a second device associated with the telephone number included in the call request; and
wherein the first line control process is further operable to:
receive the call request from the call control module;
determine the location of a second device process; and
communicate the call request to the second device process.

60. (Original) The call manager of Claim 59, wherein the first line control process is further operable to:
access a line control database associated with the first line control process to determine a PID of the second device process; and
communicate the call request to the second device process using the PID.

61. (Original) The call manager of Claim 60, wherein the second device process is operable to:
communicate the call request to the second telephony device;
receive a call proceed signal from the second telephony device indicating acceptance of the call request; and
communicate the call proceed signal to the first line control process.

62. (Original) The call manager of Claim 61, wherein the call control module is further operable to establish media streaming between the first device and the second telephony device.

63. (Previously Presented) The call manager of Claim 50, further comprising a line manager operable to receive a line registration request from a telephony device requesting a line appearance associated with the first telephone number.

64. (Previously Presented) The call manager of Claim 63, wherein:
the digit analysis module is further operable to receive the first telephone number from the line manager and to determine that the line control process associated with the first telephone number has not been created; and

wherein the line manager is further operable to create the first line control process associated with the first telephone number.

65. (Original) The call manager of Claim 64, wherein:
the line manager is further operable to communicate the PID of the first line control process to the second device process controlling the second telephony device; and
the first line control process is operable to receive a PID of the second device process from the second device process and to store the PID in a line control database associated with the first line control process.

66. (Currently Amended) Call manager software embodied in a computer-readable medium and operable to perform the following steps:

receiving a call request from a device coupled to the packet-based network, the call request including a telephone number associated with a plurality of telephony devices coupled to a packet-based network and controlled by a plurality of call managers;

~~accessing a registration information table to determine a process identification (PID)~~ of determining a line control process associated with the telephone number included in the call request;

communicating the call request to the line control process ~~using the PID~~;

determining a device process controlling each telephony device associated with the telephone number included in the call request; and

communicating the call request from the line control process to the device processes;

~~determining the device process controlling each telephony device comprises accessing a line control database associated with the line control process to determine a PID of each device process; and~~

~~communicating the call request from the line control process to the device processes comprises communicating the call request to the device processes using the PIDs of the device processes.~~

67. (Canceled)

68. (Original) The call manager software of Claim 66, wherein communicating the call request to the line control process comprises communicating the call request to a line control process executed by a second call manager software.

69. (Canceled)

70. (Previously Presented) The call manager software of Claim 66, further operable to:

receive a line registration request from a first telephony device requesting a line appearance associated with a first telephone number;

determine that the line control process associated with the first telephone number has not been created; and

create the line control process associated with the first telephone number and operable to manage calls placed to the first telephone number.

71. (Original) The call manager software of Claim 70, further operable to:
communicate the PID of the line control process to a first device process controlling the first telephony device;

communicate the PID of the first device process to the line control process; and

store the PID of the first device process in a line control database associated with the line control process.

72. (Previously Presented) The call manager software of Claim 71, wherein:
creating the line control process comprises creating the line control process executed by the call manager software; and

communicating the PID of the line control process to a first device process comprises communicating the PID of the line control process to a first device process executed by a second call manager software.

73. (Currently Amended) A call manager for routing calls in a packet-based network, comprising:

means for receiving a call request from a device coupled to the packet-based network, the call request including a telephone number associated with a plurality of telephony devices coupled to the packet-based network and controlled by a plurality of call managers;

~~means for accessing a registration table to determine a process identification (PID) of~~
determining a line control process associated with the telephone number included in the call request;

means for communicating the call request to the line control process ~~using the PID~~;

means for determining a device process controlling each telephony device associated with the telephone number included in the call request; and

means for communicating the call request from the line control process to the device processes;

~~means for accessing a line control database associated with the line control process to determine a PID of each device process; and~~

~~means for communicating the call request to the device processes using the PIDs of the device processes.~~

74. (Canceled)

75. (Original) The call manager of Claim 73, further comprising means for communicating the call request to a line control process executed by a second call manager.

76. (Canceled)

77. (Previously Presented) The call manager of Claim 73, further comprising:
means for receiving a line registration request from a first telephony device requesting a line appearance associated with a first telephone number;
means for determining that the line control process associated with the first telephone number has not been created; and
means for creating the line control process associated with the first telephone number and operable to manage calls placed to the first telephone number.

78. (Original) The call manager of Claim 77, further comprising:
means for communicating the PID of the line control process to a first device process controlling the first telephony device;
means for communicating the PID of the first device process to the line control process; and
means for storing the PID of the first device process in a line control database associated with the line control process.

79. (New) The method of Claim 1, wherein:
determining a line control process associated with the telephone number included in the call request comprises accessing a registration information table to determine a process identification (PID) of the line control process; and
communicating the call request to the line control process comprises communicating the call request to the line control process using the PID.

80. (New) The method of Claim 1, further comprising:
receiving a line registration request from a first telephony device requesting a line appearance associated with a first telephone number;
determining that a line control process associated with the first telephone number has not been created; and
creating a line control process associated with the first telephone number and operable to manage calls placed to the first telephone number.

81. (New) The method of Claim 17, wherein:
determining the location of a plurality of line control process associated with the telephone number included in the call request comprises accessing a registration information table to determine a process identification (PID) of each line control process; and
communicating the call request to the line control processes comprises communicating the call request to the line control processes using the PIDs of the line control processes.

82. (New) The call manager of Claim 36, wherein:
the digit analysis module is further operable to access a registration information table to determine a process identification (PID) of the line control process; and
the call control module is operable to communicate the call request to the line control process using the PID.

83. (New) The call manager of Claim 50, wherein:
the digit analysis module is further operable to access a registration information table to determine a process identification (PID) of each line control process; and
the call control module is operable to communicate the call request to the line control processes using the PIDs of the line control processes.

84. (New) The call manager software of Claim 66, wherein:
determining a line control process associated with the telephone number included in the call request comprises accessing a registration information table to determine a process identification (PID) of the line control process; and
communicating the call request to the line control process comprises communicating the call request to the line control process using the PID.

85. (New) The call manager software of Claim 66, wherein:
determining the device process controlling each telephony device comprises accessing a line control database associated with the line control process to determine a process identification (PID) of each device process; and
communicating the call request from the line control process to the device processes comprises communicating the call request to the device processes using the PIDs of the device processes.

86. (New) The call manager of Claim 73, further comprising:
means for accessing a registration information table to determine a process identification (PID) of the line control process; and
means for communicating the call request to the line control process comprises communicating the call request to the line control process using the PID.

87. (New) The call manager of Claim 73, further comprising:
means for accessing a line control database associated with the line control process to
determine a PID of each device process; and
means for communicating the call request to the device processes using the PIDs of
the device processes.